

**INTERACTIVE FRAME SEGMENTATION  
WITH DYNAMIC PROGRAMMING**

**ABSTRACT OF THE DISCLOSURE**

5 Control points used in deriving an object boundary for a prior frame are overlaid onto a current frame. An initial estimate of an object boundary are derived from the control points and edge energy data. The operator adjusts the control points to better model the boundary for the current frame. For each updated control point, the object boundary is rederived.

10 A restricted area is defined encompassing the initial control points. When a control point is moved outside the restricted area, the restricted area is redefined to accommodate it. The boundary between control points is derived by finding a best path. Only points within the restricted area are considered. A first set of rules is used to find the best path when the distance between the two points is less than threshold value. 15 A second set of rules is used when the distance between the two points exceeds the threshold value.